REGIONAL GOVERNMENT SERVICES

DEVELOPMENT OF A DRAFT PROPOSED MIXING ZONE POLICY
And
TECHNICAL SUPPORT DOCUMENT
For the
NORTH COAST REGIONAL WATER QUALITY CONTROL BOARD

Second Quarterly Progress Report
March 4, 2005

Overview

This serves as the second of eight scheduled reports describing the progress to date of the tasks set forth in the Project Schedule finalized on January 13, 2005. The following discussion is presented by task for the Second Quarter of work.

Preliminary TSD Research

Task 1: *Identify all existing and potential NPDES dischargers that may apply for a permit to discharge using a mixing zone. Map the discharge location of each and prioritize with respect to their discharge location, permit renewal date and other criteria as appropriate.*

After reviewing the Regional Water Quality Control Plan for the North Coast Region (Basin Plan), and focusing on Section 4, Waste Discharge Prohibitions, RGS staff propose that the prohibitions set forth for the Klamath River Basin and for the North Coastal Basin would apply also to a potential mixing zone. With consideration for those prohibitions, RGS staff has concluded that potential areas for a mixing zone would be confined to the Mad, the Eel, and the Russian river hydrologic units during the wet weather season, and to the Eureka Plain hydrologic unit on a limited basis.

RGS staff, assisted by Regional Water Board staff, has identified twenty-six existing Permittees in the North Coast Region as possible candidates for a mixing zone. Thirteen are located in the Russian River Hydrologic Unit, eight are located in the Eel River Hydrologic Unit, three are identified in the Mad River Hydrologic Unit, and two are located in the Eureka Plain Hydrologic Unit. **Attachment 1** contains a brief description of each discharger and includes the renewal date for each Permittee.

With the data provided in **Attachment 1**, Bruce Gwynne of the Regional Water Board has prepared a map of the North Coast Region for RGS staff, which highlights the hydrologic units identified as areas where a mixing zone may apply. In addition, Bruce provided maps of the four identified hydrologic units, which indicate the locations of the potential mixing zones. The maps can be found in **Attachment 2.**

Task 2: *Request from the agreement permittees a Reasonable Potential Analysis to determine the CTR criteria that each has the potential to exceed. Conduct such analyses for other identified dischargers. Identify constituents of concern.*

On April 27, 2001 the Regional Water Board issued a letter of request to all NPDES permit holders asking for both discharge and receiving water priority pollutant data for wet and dry weather periods. The data was due to the Regional Water Board on April 28, 2003.

From this data, Regional Water Board staff is conducting analyses of the potential for each NPDES permit holder to exceed any of the CTR criteria for priority pollutants. The analysis is called a Reasonable Potential Analysis or RPA. The method for conducting an RPA is fairly well established in SIP. Regional Water Board staff is conducting the RPAs as each NPDES permit comes up for renewal. The results of their analyses are used to establish the constituents for which permit limits are appropriate.

As above, RGS staff has identified twenty-six NPDES permit holders as having a potential interest in applying for a mixing zone. For nine of these facilities an RPA has been conducted and is now part of the public record. For an additional four of these facilities, the RPAs are in draft form and are due to be completed shortly. A consultant under contract to U.S. EPA is currently working on RPAs for four other of these facilities. They are due to be submitted to Regional Board staff at intervals between February 11 and April 22, 2005. Using the CTR data submitted for six of the facilities, RGS staff conducted an abbreviated RPA sufficient to develop a list of constituents of concern for the North Coast Region. For the remaining three facilities, neither the CTR data nor RPA has yet to be located. RGS staff anticipates that assistance from Regional Water Board staff will help to locate these materials in the near term.

From the information described above, RGS staff has developed the following draft list of constituents of concern within the Region.

<u>Constituents of Concern (draft)</u>
CTR #4, Cadmium
CTR #6, Copper
CTR #7, Lead
CTR # 8, Mercury
CTR #9, Nickel
CTR #10, Selenium
CTR # 11, Silver
CTR #13, Zinc
CTR #14, Cyanide
CTR #16, 2,3,7,8 TCDD (dioxin)
CTR #21, Carbon tetrachloride
CTR # 23, Chlorodibromomethane
CTR #26, Chloroform
CTR #27, Dichlorobromomethane

CTR #68, Bis (2-ethylhexyl) phthalate
CTR #103, Alpha-BHC
CTR # 105, Gamma-BHC (lindane)
CTR #108, 4-4'-DDT
CTR #113, Beta-endosulfan

Task 3: *Research the known biologic and ecologic effects of the constituents of concern.*

At present, RGS staff is considering proposing that a Mixing Zone Policy contain general language regarding the criteria by which it will be decided that a mixing zone is appropriate for any given constituent. The Technical Support Document (TSD), then, would provide the specific information necessary to judge individual contaminants. For example, a Mixing Zone Policy might deny the availability of a mixing zone for any constituent that is carcinogenic, persistent or bioaccumulative. The TSD would then identify those constituents of concern that exhibit any of those characteristics.

RGS staff has utilized information provided by the Agency for Toxic Substances and Disease Registry (ATSDR) to review toxicological profiles for most of the constituents of concern. These profiles describe the known or extrapolated human effects of exposure to the contaminants of concern through inhalation, ingestion, and dermal exposure. Further, U.S. EPA has opened an office focusing specifically on constituents that are persistent and bioaccumulative with the goal of integrating the work of its various other offices in the effort to reduce the overall loading of these contaminants to the environment. RGS staff has accessed information through the U.S.EPA web site and made personal contact with U.S.EPA. ATSDR and U.S. EPA's assessments provide a reasonable "first cut" of those constituents for which a mixing zone may be inappropriate. For example, using carcinogenicity, persistence, and bioaccumulation as criteria, a mixing zone would not be appropriate for discharges exceeding CTR criteria for: cadmium, lead, mercury, 2,3,7,8 TCDD (dioxin), and chloroform.

RGS staff will conduct additional work to develop a "second cut" based on the effects of the constituents of concern on the health and reproduction of known threatened or endangered species in the watersheds of concern. Finally, RGS will continue research into such issues as: constituents that promote the growth of nuisance organisms; constituents that produce objectionable color, odor, taste or turbidity; constituents that are mutagenic or teratogenic; and constituents that attract organisms.

Task 4*: Review the Basin Plan to identify the beneficial uses of concern in the Mad, Eel, and Russian river watersheds. Communicate with Regional Water Board staff, RGS, agreement permittees, and other local, state, and federal agencies to identify specific water intakes, recreation areas, habitat areas, or other areas of special concern in the Russian River watershed, as reasonable.*

A review of the Basin Plan indicates that the beneficial uses of the Mad River, Eel River and Russian River watersheds includes: drinking water, contact and non-contact recreation, commercial and sport fishing, terrestrial and aquatic habitat, habitat for rare,

threatened and endangered species, and areas of Special Biological Significance. The Regional Water Board, in preparation for its proposed Beneficial Uses amendment to the Basin Plan, collected information from Regional Water Board staff, the Department of Water Resources (DWR), National Marine Fisheries Service (NMFS), the U.S. Fish and Wildlife Service (USFW), and California Department of Fish and Game (DFG) relevant to these issues. Their assessment is being augmented with additional Internet research. In addition, a letter has been drafted which will be sent to the twenty-six dischargers of interest requesting their input on these questions.

RGS staff has updated a mailing list of interested parties, including local, state and federal agencies able to identify water intakes, recreation areas, habitat areas, and other areas of special concern in the Russian River. Representatives of these agencies were invited to participate in a Scoping Meeting as described below.

Task 5: *Finalize draft of TSD outline for public distribution.*

The TSD outline is contained in the" Project Schedule for the Development of Draft Mixing Zone Policy and Technical Support Document," finalized on December 31, 2004. The document is contained on the Regional Water Board's web site and was the subject of public comment at the Scoping Meeting held February 23, 2005.

Task 6: *Schedule, prepare reports, and observe Regional Water Board staff conduct public meeting to inform the public and to receive comments on the scope of the mixing zone work effort.*

On January 26, 2005, Ranjit Gill of the Regional Water Board staff presented an update on the development of a mixing Zone Policy to the Regional Water Quality Control Board at its regular meeting. Following is a summary of comments from both Board members and members of the public during discussion of the agenda item and preliminary responses.

Bill Massey, Regional Water Board Member

Comment: It would be advisable to coordinate development of the draft mixing zone policy with the staff of Region 2 to ensure consistency. For example, the Sonoma County Water Agency is an entity that is regulated by both Regional Water Boards.

Response: Regional Water Board staff has contacted the planning units of all of the Regional Water Boards and the State Water Board regarding its efforts to develop a mixing zone policy.

Dave Smith, Merritt Smith Consulting

Comment: As a representative of the NPDES Permittees funding the RGS effort to develop a mixing zone policy (i.e., the cities of Santa Rosa, Healdsburg, and Ukiah, the Town of Windsor, and the Sonoma County Water Agency), Dave expressed support for the mixing zone policy development process. He stated that the ability to discharge using a mixing zone would significantly increase the

availability of Russian River water for beneficial uses. It would also result in significant economic savings to the Permittees.

Response: The Basin Planning process requires Regional Water Board staff to address economic impacts when considering a Basin Plan amendment. Upon request by RGS staff, Dave has agreed to provide information regarding the projected economic savings that would result from the development of a mixing zone policy.

Brenda Adelman:

Comment: The development of the mixing zone policy should include public input. She questioned how the on-going policy development process would affect the renewal of the City of Santa Rosa's NPDES permit, due in two months.

Response: As stated in the discussion of Task 4, RGS and Regional Water Board staff compiled an extensive mailing list for this project. This mailing list was used to notify the interested public of the project, including notification of a Scoping Meeting for the Mixing Zone project. In addition, the Notice of a Scoping Meeting has been placed on the Regional Water Board web page. See http://www.waterboards.ca.gov/northcoast/

To date, the City of Santa Rosa has not requested a mixing zone in connection with its upcoming permit renewal. However, the City of Santa Rosa has publicly stated that it may consider such a request at a later date.

Richard Grundy, Regional Water Board Member:

Comment: Mr. Grundy cautioned that historically at the federal level at least, mixing zones have been used to justify higher levels of discharge. He requested written clarification of the background and history of the use of mixing zones from both the federal and state perspectives. He also expressed a desire to review any legal issues arising from the application of mixing zones.

Response: RGS staff requested and received the background technical support used by the State Water Board in its development of its approach to mixing zones contained in SIP, and forwarded that information to all of the Regional Water Board Members.

Although SIP delegates the powers to the Regional Water Board to include mixing zones and dilution credits in NPDES permits, it also sets forth specific and limiting criteria for such discharges. At the current time, the Basin Plan is outdated in that it does not address matters related to the achievement of the water quality criteria for Priority Pollutants identified by the California Toxics Rule (CTR). This is a matter that impacts all NPDES Permittees in the North Coast Region to some extent.

To date, at least one Regional Water Board has been challenged by an NPDES discharger (ref. Petition of Yuba City for Review of Waste Discharge Requirements issued by the California Regional Water Quality Control Board, Central Valley Region) for not adequately considering a request for a mixing

zone. RGS staff, along with Regional Water Board staff, has taken the approach that defining the parameters for a mixing zone in a policy may prevent such a challenge from occurring in the North Coast Region.

The Regional Water Board conducted a public Scoping Meeting for the Development of a Mixing Zone Policy on February 23, 2005. The notice of the Scoping Meeting can be located at the following Internet address: http://www.waterboards.ca.gov/northcoast/. Approximately thirty-two interested individuals and agency representatives attended the meeting, and oral and written comments were received at that time. A summary of the comments and responses is shown in **Attachment 3** to this report. The comments will be considered in preparing the draft mixing zone policy.

Task 7: *Submit Progress Report to RGS, agreement permittees, interested stakeholders, and Regional Water Board staff.*

RGS staff finalized its first Quarterly Progress report on January 13, 2005. This report was included in the agenda package for the Regional Water Board meeting on January 26, 2005. The first Quarterly Report, and this, the Second Quarterly Report, is also available on the Regional Water Board web page http://www.waterboards.ca.gov/northcoast/. As stated under Task 4, a list of interested stakeholders is being developed and maintained. RGS staff remains in communication with Regional Water Board staff on almost a daily basis.

2ndQlyRptAtt 1

2ndQlyRptAtt 2

2ndQlyRptAtt 3